

With the Author's Compl't.

ON THE HEALTH OF LONDON DURING THE SIX
MONTHS TERMINATING SEPTEMBER 28, 1850.

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THE approval which has been expressed, in several quarters, of my previous half-yearly Reports on the Health of the Metropolis, published in the LONDON JOURNAL OF MEDICINE, induces me again to resume the subject. In doing so, I gratefully acknowledge the favourable notice which medical writers, and others, have taken of my former papers; and, as the facts then collected, and my commentaries, were considered valuable, I here follow the method formerly adopted. I also believe with practical physicians, that medical science and practice, and sanitary improvements, are greatly promoted by the accumulation of evidence, on a large scale, respecting the diseases and mortality of so immense a population as that of London. Deductions drawn from the innumerable data contained in the Registrar-General's important Reports, have become of very great value to the philanthropist and the physician, from the more accurate knowledge which they impart of the fatality of certain diseases in particular localities, and during different seasons. Few subjects, in my opinion, are more instructive than the investigation of questions connected with public health, of the causes of disease, and especially of the means best adapted for their prevention and cure. It ought to be kept constantly in view, that to point out the existence of an evil, is often not only the first but the greatest step towards its removal or alleviation.

I will now proceed to offer some remarks on the State of Health noticed amongst the metropolitan population during the six months, terminating on the 28th of September in the present year; thereby furnishing a continuation of the reports which I have already published. And it affords me much satisfaction at once to state, that the late summer and autumn have been unusually healthy, even if compared with ordinary seasons, but particularly so, when contrasted with the year immediately

preceding. Throughout the second and third quarters of the present year, that is, from the 30th of last March to the 28th of September, 22,816 persons have died in London from all causes; whereas, during the parallel period of the year 1849, not fewer than 40,117 persons died from different diseases, being a diminution of 17,301 deaths, or 43·12 per cent. in the recent, compared with the previous season. Restricting the comparison, however, to the last three months of the above period, or to the quarter terminating on the 28th of September, the difference is most remarkable; 27,109 deaths having been reported in London during the months of July, August, and September of 1849, in contradistinction to 11,578 in the parallel seasons of the current year; being a decrease in the latter of 15,531 deaths, or nearly three-fifths of the previous mortality.

DISEASES WHICH HAVE LATELY EXHIBITED A DIMINISHED RATE OF MORTALITY. The great difference already noticed in the amount of deaths throughout the metropolis in the two periods, was chiefly owing, as is well known, to the severity of the epidemic Cholera, so fatally prevalent last year in London; but which, fortunately, has this year been of very rare occurrence, compared with the epidemic of last season, only 96 persons having died from this disease during the entire six months referred to in the present communication, instead of 13,115 in the same period of last year. The contrast is more extraordinary, if the first two weeks of the month of September in each year be compared. In 1849, cholera proved fatal to 3,708 individuals in this short period; whereas, in the parallel two weeks of September in the current year, only twelve persons died of that malady.

Diarrhœa and Dysentery, so severe in 1849, have proved, this year, much less frequent. During the second and third quarters of last year, 2,946 persons died in London from these diseases; but throughout the similar six months of the current year, the deaths from the same causes amounted only to 1,459. Of these, almost half, or 691 fatal cases, were reported during August.

Measles have also been less fatal than in 1849. During the past six months of the current year, 410 persons died of that disease, in contradistinction to 642 during the former period. Scarlatina has this season been comparatively mild, only 550 fatal cases having been reported, instead of 883 during the parallel six months of last year. If compared, however, with the same six summer and autumn months of 1848, the difference in respect of fatality is very great. No fewer than 2,376 individuals then died of scarlatina, which continued to prevail, even more intensely, during the last three months of 1848 than previously, having carried off 1,765 persons during that short period of time; hence proving a much more destructive malady than had been known in the metropolis for many years. Since that season, scarlatina has gradually declined, as indicated by the small amount of deaths now reported. Hooping-cough, another affection often fatal to young persons and children, has likewise prevailed less frequently this year than the last; 706 deaths by that complaint having been reported from the 30th of March to the 28th of September in the present year, instead of 1,167 during the same six months of 1849.

Typhus Fever, which I have elsewhere designated a good *nosometer* of public health, has likewise been of late less prevalent than previously. There is no circumstance more indicative of the salubrity or unhealthiness of places and seasons, than the amount of typhus fever prevalent amongst the inhabitants; hence it is satisfactory to state, that in the metropolis, this disease has proved less fatal than in former seasons. During the six months embraced in the present report, 900 persons have died from typhus; whereas, during the parallel period of 1849, the deaths, by the same cause, were 1,222, being 35·47 per cent., or rather above one-third more numerous than recently. On comparing the recent period with the six summer and autumnal months of 1848, the difference is still more evident; as the deaths from typhus fever which then occurred in London, amounted to 1,764, being nearly double the number (900) reported during the last two quarters.

Phthisis has likewise been the cause of death in a smaller number of persons than during last year; 3,056 individuals having died from this in London during the last six months, instead of 3,214 in the corresponding two quarters of 1849; making a decrease of about 5 per cent.

Pneumonia and Bronchitis come also within the category of diseases which have exhibited a diminished rate of mortality. Thus, during the summer and autumn of 1849, the deaths from these two pectoral complaints amounted to 2,569; whilst in the parallel six months ending the 28th of last September, only 2,227 deaths are reported, being a diminution of 342 cases, or more than one-seventh. Convulsions are reported to have proved fatal in 839 persons, during the last six months; in contradistinction to 1,028 during the same period of the year 1849; being a diminution of 189 in the number of deaths, or 22·53 per hundred. Erysipelas is sometimes a very serious disease, especially when the patients in an hospital become attacked, as it is difficult to eradicate from the institution, and often rebellious to treatment; nevertheless, it has proved less fatal recently than in former seasons. Thus, during the six months embraced in the present report, erysipelas caused death in only 168 patients; whereas during the corresponding two quarters of 1849, the number of fatal cases, by the same disease, amounted to 213, being a decrease of 45, or 26·78 per cent. in the more recent period.

Besides these illustrations, it may be mentioned, that Diseases of the Heart and Blood-vessels produced, in the aggregate, fewer casualties than last year; the comparative numbers being 896 deaths, during the recent six months, instead of 942, in the corresponding six months of the year 1849.

DISEASES WHICH HAVE EXHIBITED AN INCREASED RATE OF MORTALITY. Although the health of the metropolis has been generally satisfactory, throughout the whole of last summer and autumn, as shown by the statements just enunciated, several of the ordinary maladies have nevertheless manifested a different character.

Influenza has been rather more frequent during the last, than during the previous season; 45 deaths by this malady having been reported, instead of 25 in the corresponding two quarters of 1849.

Cancer has proved fatal to 457 persons during the last six months, instead of 397 during the second and third quarters of 1849.

Insanity has likewise been more fatal; 51 persons having died, instead of 41 in the parallel period of 1849.

Inflammation of the Liver also exhibits a slight increase of mortality; 107 deaths from hepatitis having been reported, instead of 96 in the previous period.

Ovarian dropsy, moreover, has been more fatal in the recent period; 35 females having fallen victims to that complaint, from the 30th of last March to the 28th of September; whereas, only 20 individuals are reported to have died from a similar cause during the parallel two quarters of 1849. In addition to the above important fact, it may be also instructive to mention, that of late years, this serious disease seems to have proved more deadly than formerly. Thus, during three years ending the 31st of December, 1841, the total deaths in London by ovarian dropsy were only 40; whereas, during the three years terminating the 31st of December, 1848, they amounted to 142, or more than treble the previous amount. These statements, indicating the recently augmented mortality by the disease in question, I have been induced now to mention, as they must be interesting to practical surgeons and pathologists. Does this increased fatality depend upon ovariectomy, and diagnosis by exploratory incisions, being now in vogue?

DISEASES EXHIBITING AN UNIFORM RATE OF MORTALITY. Speaking generally, although diseases affecting the Kidneys and Urinary System have proved rather more fatal recently than in the previous season—the total deaths by the above causes being 296 in 1850, and 279 last year; still, some of the affections, in this division, have exhibited a nearly uniform mortality. For instance, 13 persons died of Stone in each half year; 67 died of Bright's disease during the last six months, and 65 in 1849. Diabetes proved mortal to 18 persons in the six months of 1850, in lieu of 20 carried off by the same malady during the parallel two quarters of the previous year. This however is a complaint which cannot be regarded as renal.

From Puerperal Diseases, during the six months just terminated, 200 fatal cases have been recorded, the number during the parallel six months of 1849 having been 210; thus showing a slight recent diminution. Seeing the number of births during the last two quarters was 36,604, it becomes an interesting inquiry to ascertain the ratio of deaths incident to females during, or immediately after, parturition. From the data at present attainable, it is only an approximation to the truth, that can be here enunciated; still, taking into calculation twin and triplet births, which are much less common than many persons may perhaps suppose, being in the proportion of about one twin birth in every 113 cases, it follows, that nearly one female dies in every 180 parturitions. When puerperal fever prevails epidemically in lying-in institutions, the mortality will be, in that case, augmented; but, looking at last year's experience, the above calculation is very nearly correct.¹

As an illustration of the small proportion of twin births, it may be interesting to mention, that in 1845, when 65,884 children were born in London, there were not more than 580 cases of twins, and only two instances of triplets. Of the twin

Considerable uniformity in the rate of mortality has been likewise noticed in other diseases. Apoplexy proved mortal to 618 individuals in the six months of 1850; the deaths being 612 in 1849. From Hernia 65 died in the six months of 1849, whilst the fatal cases, by the same disease, were 62 during last season. Delirium tremens was the cause of death during the past six months in 96 cases, whereas the number was 94 in the previous year. Although this dangerous disease has not varied much in respect to its mortality during the last and present year, it should be noticed that, as compared with many former periods, delirium tremens has recently greatly augmented, both in frequency and fatality, in the metropolis, as shown by the following statement. During the whole of the year 1841, 83 individuals died from this disease; in 1844, the deaths rose to 95; in 1847, they amounted to 156; and in 1849, delirium tremens proved fatal in 164 cases; the mortality being thus almost double of that in 1841. These are important facts, and deserve serious attention from medical men, as well as from the advocates of temperance. More human beings annually fall victims to this complaint, which is really disgraceful to the individual, if one might employ such an expression, than to syphilis, gout, insanity, and several other maladies. Such a fact is not creditable to the present age, nor to its much boasted civilization.

MORTALITY AMONG CHILDREN. The large number of children who annually fall victims to disease in London, exhibits a feature in the mortuary reports of the metropolis, which ought to arrest the deepest attention. If nature's laws were more frequently followed,—were the proper feeding, and judicious clothing of young persons more in accordance with common sense, and with their tender constitutions,—and farther, if their physical education constituted a greater part of the duties of parents and attendants, in addition to their moral culture,—I feel assured that so large a proportion as 45 per cent. of the total deaths would not be met with among children. Of the 22,816 deaths recorded in London from all causes, during the last six months, 10,242 of the individuals who died had not yet passed their fifteenth year, many being even infants or young children, whilst 7,787 were in the prime of life, viz, from puberty to 60 years of age, and 4,657 were old people; thus

births, 183 mothers had two boys, 176 bore two girls, and 221, or two-fifths of all the patients, had each a boy and a girl. It is also curious, that a large proportion of the above 580 twins cases occurred in the out-parishes of the metropolis. Thus, 43 were reported from Lambeth; 34 from St. Pancras; 34 from Kensington and Chelsea; 27 from St. Marylebone; also 27 from Shoreditch; 26 from Stepney; and 22 from Islington; whilst one of the triplet births occurred in Shoreditch, the other in the London City District. The first case was the wife of a shoemaker, who had two girls and one boy; the other was the wife of a tailor, and had three girls. It will also be interesting to state, in reference to triplet births, that in all the other districts of England, out of 477,637 births in 1845, only seventeen instances of females who had three children at a time are recorded; whilst not more than two examples of quadruple births were met with in the same year throughout the whole of England; one being the wife of a cowkeeper at Croydon, who had one boy and three girls; the other case was the wife of a draper at Haslingden, in Lancashire, who bore four boys at the same accouchement. It has been alleged (and I suspect truly), that the proportion of plural births is much greater among the Irish than the native English population.

leaving only 130 cases in which the age was not stated. These facts incontrovertibly show that more children than adults die in this great metropolis, notwithstanding the often dangerous and even insalubrious character of the occupations in which the latter are engaged, and their being further exposed to many causes of disease, to which children are rarely subjected.

Several of the complaints which usually prove fatal to children, such as scarlatina, measles, hooping cough, and convulsions, having been already mentioned, it would be superfluous again to discuss these maladies. To one cause of death, however, on which I offered some remarks in my last report,¹ I would again specially call attention. I mean "the privation of breast-milk"—the natural food of infants. From this cause, not fewer than eighty-nine infants are reported to have died in London during the last six months. And when it is remembered that, during the parallel six months of 1849, the number of deaths from the same cause, amounted to 111, it is at least somewhat consolatory, that the number has thus recently decreased. Having specially adverted to the great annual mortality amongst children, in my former report, I will only now repeat, that the subject demands serious attention, as it shews that there are sources of disease affecting this interesting class of the community, which do not produce the same lethal effects upon individuals in more advanced life; notwithstanding the many influences injurious to health to which the latter are constantly exposed.

VIOLENT DEATHS. The number of persons who every year lose their lives in London by violence or accidents, is much greater than would probably at first be imagined. During the last six months, 769 individuals are reported to have died violent deaths in the metropolis, which makes one case in nearly every thirty of the whole mortality. Of the above 769 violent deaths, 268 were produced by fractures and contusions; 155 were drowned; 89 died from burns and scalds; 51 by poison; and 37 by wounds; besides other casualties, which it would be superfluous to particularise.

In reference to the subject of violent deaths, it may be interesting, although rather a digression from the immediate subject of this paper, to allude to the marked discrepancy usually noticed amongst two classes of men, in regard to their comparative liability to accidental death; I mean soldiers and sailors, not only in London, but throughout the whole of England. As it is impossible, when discussing this point, to quote recent occurrences, the peculiar facts, met with of late years, not having yet been published, I must refer to a former period, viz. 1840; which will however answer every purpose, and also sufficiently illustrate the question.

Sailors are no doubt more numerous in London than soldiers, besides being frequently changed, by arrivals and departures: yet it is curious, that only four soldiers out of about 5,000 men, including Woolwich, lost their lives by violence throughout the entire metropolitan districts, during the year 1840: one being killed by a fall, and another by a horse, whilst the causes of the remaining two deaths were not specified. On the other hand, the number of sailors within the same category,

¹ LONDON JOURNAL OF MEDICINE, June 1850, p. 543.

amounted to 64; of whom 37 lost their lives by drowning. The difference is even more remarkable if the whole of England be taken into account. Only eleven soldiers died by violent means beyond London; whereas, the deaths from violence among sailors in the same districts, amounted to 282; of whom 209 were drowned. The aggregate number throughout the whole kingdom, was thus 15 soldiers and 346 sailors; of whom 226 were drowned—not at sea, it should be remembered, but in the rivers and harbours of England and Wales. Of the eleven cases of violent death among soldiers, six occurred in the counties immediately round London, two in the eastern parts of England, two in Cheshire and Lancashire, and one in Wales; the immediate causes of death being drowning in six; injuries by horses in three; falls in two; and poisoning by opium in one. The causes of the remaining three are not specified. These statements are very singular, and demonstrate the much greater safety of a soldier's life in England, compared with that of the sailor. The facts also indicate the good conduct and discipline of the British army; and I will venture to affirm, that in no other country have 30,000 military passed an entire year with the loss of only fifteen men by violence; not one of whom died either by *lead or steel*. Viewed in every way, this statement, founded on authentic documents, is highly gratifying; and it seems so different from what most persons would expect, that it has appeared deserving of being here recorded, and especially noticed.

MORTALITY AMONG THE PAUPER POPULATION. Amongst the 22,816 deaths registered during the six months embraced in the present narrative, nearly one-sixth, or 3,549, took place in the prisons, hospitals, workhouses, and other public eleemosynary institutions; thus shewing that 15·61 per cent of the total mortality occurred among the pauper population. It is also instructive to state, that the majority of the above patients were men, the number being 2,099, and only 1,450 women; which is more remarkable, as the lunatic asylums, comprised in this category, contain more female than male inmates.

PRISONS. The prisons of London have lately exhibited a degree of health much superior to their condition during the last century. Indeed, few places appear to be more free from disease; and this doubtless arises from the sufficient and wholesome dietary, and the discipline to which the inmates are subjected, besides the diminished influence of vice and intemperance. During the last six months, only forty-four deaths have been reported from all the prisons of the metropolis; thirty-five being men, and nine women. This constitutes a very small mortality amongst so numerous a body as the London prisoners, the number of whom, according to the most accurate accounts, recently amounted to 6,113; 5,483 being males, and only 630 females, the greatest proportion of both sexes being criminals. The chief exceptions were inmates of the Queen's Bench Prison, and the debtors of Whitecross-street, in which two places, 384 prisoners were then confined. From the above data, it appears that one death occurred in every 156½ male prisoners, and one in every 70 females. It should be also remembered, that the inmates were often changed by the committal of new offenders, and the release of those prisoners whose period of confinement had expired;

nevertheless, I believe, so low a rate of mortality will rarely be met with amongst any other class of persons. To shew the great salubrity of the London prisons, it may be stated, that among 10,015 prisoners committed to the House of Correction at Coldbath Fields, up to a very recent date, there had only occurred six deaths; being not more than one fatal case in every 1669 inmates.

One remarkable feature ought to be here especially mentioned, in reference to the metropolitan prisons. However beneficial confinement in such places may really prove to the bodily health of the inmates, it sometimes appears to produce an opposite effect upon their mental condition; particularly in those undergoing solitary or separate punishment. This baneful influence is fully established by the fact, that from two London prisons, viz., Pentonville and Millbank, where only convicted criminals are confined, 61 prisoners were sent to Bethlehem Hospital during the last ten years, who had become insane; 47 being men, and 14 women; besides four men who came from the hulks, but had previously resided in Pentonville prison. In addition to these sixty-five individuals, several male and female prisoners have been also admitted from other gaols as lunatics into Bethlehem Hospital, although to a much smaller extent. The effect of confinement in prison upon the mental faculties, is hence very decided; and it should be remembered, that the above 65 cases of insanity sent from the metropolitan prisons, and now reported, were not persons acquitted because they were insane, but prisoners actually undergoing sentence for previous crimes and misdemeanours.

LUNATIC ASYLUMS. During the last six months, the deaths in the metropolitan asylums for the insane, whose average population is about 3,527, consisting of 1,573 male and 1,954 female lunatics, amounted to 171; 96 men and 75 women; being one death in nearly every 16 male, and only one in every 26 female lunatics, during the last half year. This seems a moderate rate of mortality, especially amongst the female lunatics, who are also the most numerous. These facts are the more interesting, as they prove the correctness of an observation which I have elsewhere made, and which was based upon extensive data, that mania, although more common among women, is in them more curable and less fatal than among men. Female maniacs, moreover, are likely to attain greater longevity than male lunatics.

LYING-IN HOSPITALS. At lying-in hospitals, which sometimes present a very high degree of mortality, the number of deaths has been comparatively small during the last six months; only 18 fatal cases of child-birth having occurred in the four public establishments of that kind in London, most of which happened during the first quarter of that period. To the 18 deaths of mothers, must be added those of 12 children.

GENERAL HOSPITALS. From the eleven General Hospitals of the metropolis, there has been reported nearly one-third of the total number of deaths referred to in a previous paragraph, as forming the gross mortality amongst the pauper population. The actual number of deaths was 1,051, during the last six months. They may be thus classified, to enable readers to form their own opinions.

STATISTICAL TABLE OF DEATHS IN THE ELEVEN GENERAL HOSPITALS OF
LONDON DURING SIX MONTHS TERMINATING SEPTEMBER 28, 1850.
(COMPILED BY DR. WEBSTER.)

Hospital.	Number of Beds.	Total Deaths.	Ratio of Deaths to Beds.
St. Bartholomew's	580	180	1 to 3 $\frac{1}{4}$
Guy's	580	164	1 to 3 $\frac{1}{2}$
St. Thomas's	487	115	1 to 4 $\frac{1}{4}$
London	320	120	1 to 2 $\frac{3}{4}$
St. George's	320	106	1 to 3
Middlesex	285	86	1 to 3 1-5
Westminster	175	78	1 to 2 $\frac{1}{4}$
Free	140	22	1 to 6 $\frac{1}{3}$
King's College	120	66	1 to 1 8-10
Charing Cross	110	36	1 to 3 1-18
University College.....	106	78	1 to 1 $\frac{1}{3}$
Totals	3223	1051	1 to 3 1-14

According to the above statement, some very useful data, both in reference to the mortality met with amongst a certain class of the community, and also to the amount of accommodation available in Public General Hospitals for their treatment during sickness, may be now brought under review. Few persons would perhaps believe, that in a population of 2,300,000, there are at present only 3,223 beds for the indigent sick in all the General Hospitals of London, exclusive of the special institutions for particular diseases, such as fever, small-pox, and consumption; but such is the fact. Many of the inmates of these *charitable* establishments are not always of the indigent classes, but persons sometimes in easy circumstances, or domestic servants from the houses of governors, and even of noblemen, and also petty shopkeepers; nay, patients sent from the country, who thereby incur expense. Hence, it appears, that the actual sick poor of London are not the exclusive participants of the benefits of these institutions. Taking the matter nevertheless as it exists, and looking only at the data contained in the table now supplied, and which has been compiled with every desire to ensure accuracy, the following inferences may be legitimately deduced: 1st. One death in every 21·75 of the total mortality throughout London, or 4·60 per cent., took place in the eleven general hospitals, during the last six months. 2nd. One patient died for nearly every three beds, speaking in the aggregate. 3rd. The highest rate of mortality generally occurred in the smallest hospitals. 4th. With one exception, the lowest comparative ratio of deaths was observed in the large or more populous institutions. 5th. The fewest deaths, in reference to the published number of beds, was reported from the Free Hospital; and 6th. The largest comparative mortality, according to the same calculation, occurred at University College Hospital.

On the other hand, when comparing one hospital with another, it is curious to observe, that the mortality was nearly the same at St. Bartholomew's and Guy's, the two largest institutions of the kind, and having each the same number of beds, viz., 580. Again, at St. George's and the London hospitals, each having 320 beds, one being situated at the west end of London, the other at the east, where an immense number of serious accidents constantly occur, and certainly very many more

than in the neighbourhood of Piccadilly, there is not much difference in the rate of mortality. This is, however, in favour of the latter hospital, although still inferior to the Middlesex, St. Bartholomew's, and Guy's, but especially to St. Thomas's Hospital, where the ratio of mortality was less than at any other similar institution, with the sole exception of the Free Hospital, as previously stated. I am fully aware that these calculations must not be taken as absolutely free from all fallacy, since the admissions of patients may be more numerous at one establishment than at another. But I think that this argument, if it has any force, would rather militate against the smaller and more modern hospitals, to which letters of recommendation from a governor, unless for accidents, are often required to ensure the reception of an in-patient; while at the two ancient Royal Hospitals of the city, and at Guy's, where the rate of mortality has been found to be lower, the facility of admission is greater, and the applications, consequently, likely to be more numerous. The subject here mooted, is both so important and instructive, that it deserves further inquiry; indeed, it is solely with that object I have now made these imperfect remarks, and based them upon the numbers contained in the average table; which, I believe, is the first ever compiled in illustration of the results obtained at the eleven general hospitals of London, viewed comparatively.¹

Before taking leave of the London Hospitals and their recent mortality, I must remark, that few documents would prove more useful to the medical profession, than a well-arranged yet succinct general statement of all the facts and agenda noted in each separate institution, combined and classified in an uniform, systematic, but not too complex a manner. If from the country hospitals and infirmaries, as well as from the metropolitan, similar statements were annually made, the accumulated facts would materially tend to dissipate many erroneous opinions and speculative doctrines, which could not then withstand the counteracting influence of sound practical experience, supported by, and based upon, numerous facts verified by repeated observation. General hospitals ought to follow the excellent examples now set by many lunatic asylums; the authorities of which annually publish a report of their proceedings, both lay and professional, accompanied by numerous, varied, and often useful tables respecting the patients under treatment, the character of their particular maladies, the results obtained, and often highly important statistical data, besides other matters of much interest and practical value. Every hospital and infirmary throughout the country should do this; and if some master mind would take the whole facts thus supplied, and arrange them in a lucid and instructive manner, the great desideratum adverted to, would be effectually supplied. If documents of the kind described had been regularly issued by the authorities of the different London hospitals, detailing the chief *res geste* when the Potts, the Hunters, the Baillies, the Abernethys, and the Coopers were attached to these institutions, the facts collected by such eminent men would be invaluable to the modern practitioner. Nevertheless, were

¹ The basis upon which Dr. Webster's conclusions are founded, as to the mortality of the different hospitals, is open to some objection; but his remarks are likely to be useful, by inducing the authorities to afford better data. In the mean time, we refer to our report of the discussion at the Society where Dr. Webster's paper was read. EDITORS.

the plan carried out for the future, particularly whilst there are many distinguished physicians and surgeons on the medical staff of those establishments, great benefits would thus accrue, not only to all now in practice, or entering the profession, but to posterity. Let us take, as an illustration, hernia or fractures, about which considerable difference of opinion sometimes prevails in reference to the treatment. Could the surgeon easily refer to a large array of cases reported by the ablest practitioners of ancient and recent times, much of the present discrepancy of opinion on such a subject must give way before the weight of evidence derived from such sources. The treatment of medical diseases, likewise the value of particular remedies, the symptoms characterizing epidemics, the types of even ordinary maladies, the rate of mortality observed, and many other interesting questions, would be all greatly elucidated by the system here suggested. I therefore hope the parties, who have the power, will take the subject and plan now suggested into consideration, and by an united effort remove every difficulty which might retard its realisation. It gives me pleasure here to state that the authorities of some of the great metropolitan hospitals have recently ordered, and secured for the future, faithful records of all the cases admitted within their walls, which I hope will be published.

Edinburgh and Glasgow, however, deserve in this respect greater honour, as from their very institution they set this noble example. In the Edinburgh Infirmary, clinical reports are preserved from the first opening of the hospital; and indeed it was from the clinical teaching within the infirmary, that the Edinburgh School of Medicine arose: that school so long pre-eminent and still illustrious in Europe. The usefulness of a long series of such records is well illustrated by Dr. James A. Lawrie's paper on the "*Results of Amputations*," published in the *London Medical Gazette* for 1840, which contains an analysis of all the amputations performed in the Glasgow Infirmary from its institution in 1794 to 1839: as well as by the truly valuable and elaborate series of Essays entitled "*Contributions to the Statistics of Injuries of the Head*" published by the same accomplished surgeon, in conjunction with Dr. Alexander King, in the annual volumes of the *Edinburgh Monthly Journal* for 1843 and 1844. These Essays embrace an analysis of the nature and the treatment of all the cases of injury of the head admitted into the Glasgow Infirmary from 1794 to 1841. The pathological and statistical records of the Edinburgh Infirmary, I would just add, were placed upon a nearly perfect system by the late lamented Dr. John Reid; and the same afterwards has been successively maintained by his industrious and talented successors, Dr. T. B. Peacock, Dr. Hughes Bennett, and Dr. W. T. Gairdner. If great scientific treasures have been accumulated by the good order prevailing in two comparatively small and poor northern hospitals, what are we not entitled to demand from the richly-endowed and vast establishments of Guy, St. Thomas, and St. Bartholomew?¹

EXCESS OF BIRTHS OVER DEATHS. Similar to the facts stated in my

¹ I would here mention with pleasure, that good statistical and clinical registers have been kept for several years past in the Hospitals of Nottingham and Oxford. I have also reason to believe, that the same laudable system is followed in other provincial hospitals.

former report, a considerable excess of births over deaths, amounting to 13,542, has taken place during the last six months. The increase reported in the first three months of the above period was 7,064; but in the quarter ending the 28th of last September, it was only 6,478. This arose, both from the mortality being then rather greater by 568 deaths than the preceding quarter, and also from the circumstance that more children were born during the months of April, May, and June, than in the subsequent season. This result is consistent with ordinary experience, as births are always more numerous in London during the early months, and spring of the year, than afterwards. The excess of births over deaths in the metropolitan districts, referred to in my previous report, having been 10,128 in the six months, it thus appears, that the total excess has been 23,670 throughout London during the past year. This furnishes one cause, amongst others, of the constant increase of the enormous population now resident in the British metropolis.

ATMOSPHERIC INFLUENCE. During the whole six months embraced in this report, the weather, although rather cold for the season, was seldom marked, with only a few exceptions, by great fluctuations of temperature. The greatest variation was on the 1st of June, when the thermometer indicated 78·1 as the highest degree of heat, and fell to 43·8 at night; thus making a difference of more than 34 degrees. The above was, however, a rare instance, the variations throughout the entire period being very moderate, or, to speak generally, 19 of the 26 weeks now referred to, were characterized by an unusual equality of temperature, both by day and night; whilst only 7 weeks of the same period indicated any considerable fluctuations, chiefly in the months of May and June. The temperature was never very high at any period, having only six times exceeded 80 degrees during the first three months; and on only seven days during the last quarter. The highest noticed throughout the whole period, was 87° on the 16th of July: during the night of that day, however, it fell to 60·3.

The medium pressure of the atmosphere was somewhat low, during the months of April and May, being frequently under 29½ inches, but on one occasion only, viz., the 4th of April, was it below 29 inches. During the second quarter, the barometer ranged higher than in the former period, having very seldom fallen under 29½ inches. Indeed, it was generally near, or even above, 30 inches, especially throughout the last days of August and the greater part of September. Thus, during twenty days continuously, ending the 17th of September, which, it should be remembered, included the days parallel to those which I have called the "*black week*" of 1849, the pressure of the atmosphere was always high, never being under 30 inches, and sometimes above 30·25. This makes the atmospheric pressure to range, on an average, about four-tenths of an inch higher than in the similar weeks of 1849; the wind being at the same time generally north-west or north-east, having also considerable movements, whilst the temperature was low, but not variable.

During this period likewise, the greatest difference betwixt the day and night temperature was 27, although sometimes the alternation was only 14·13, and occasionally only 8 degrees. Electricity seemed often positive; notwithstanding the weather continued dry, the sky was fre-

quently overcast. These particulars may be well contrasted with the description of the atmospheric phenomena at the same period of 1849, and given in my last year's report, when London almost resembled, as it were, a pest-house.

At that period, the atmosphere produced an oppressive and ungenial feeling upon the human frame; the sky was always hazy, and, at times, appeared like a thick mist, the air being generally very dry; scarcely any wind prevailed, and when it did, the direction was often south-west or southerly, with diverging currents, while this year it was north-west or north-east, blowing more freely, and without diverging currents. Farther, the most remarkable feature observed in September 1849, in reference to the atmosphere, was the frequent and daily very extensive fluctuations exhibited by the thermometer, the alternations being sometimes so high as 30 degrees, between the warmth of the day and night-time; whilst the lowest temperature, in the previous month of August, was 42, the highest being 82, thus giving a difference of 40 degrees. These are instructive phenomena, and may in part account for the great discrepancy noticed in the two seasons; 8,844 persons having died in London during the three weeks ending the 15th of September, 1849; whereas, during the parallel three weeks, ending the 14th of September, 1850, only 2,710 deaths are recorded; thus making a diminution of 6,134 in the short space of twenty-one days, or to less than one-third of the previous mortality, in favour of the recent season.

Besides the peculiar features just described, as characterizing the recent healthy season, it should be likewise mentioned, that the sky lately was seldom clear or cloudless, being frequently overcast; the wind was generally west or westerly, north or north-easterly, but very rarely southerly. The weather was not dry, unless in the early part of September, since frequent showers prevailed; electricity was often positive; whilst the summer and autumn of 1849, it should be always recollected, were the driest known for upwards of thirty years. The more recent season shewed, as already stated, greater equality in temperature, the movement of the wind being quicker, and from a salubrious quarter; whilst the amount of electricity seemed more apparent, and was oftener positive than in the previous year.

I am fully aware of the difficulty of making exact observations respecting the influence of atmospheric phenomena, in the production and modification of diseases, or in deducing therefrom correct conclusions; but being anxious to bring this important subject before the profession, in order to move other and more capable observers to pursue the inquiry, I have here, as in previous reports, given the result of my own limited experience. In this, as in every other scientific investigation, correct knowledge can only be obtained by repeated and numerous observations, carefully made by various individuals. As an illustration of the influence which even changes of temperature frequently exert upon the human frame, it is only necessary to observe, that a sudden fall of one or two degrees of the thermometer, especially in the night-time, will cause death in many patients, who otherwise might struggle on a little longer, were the temperature less variable. Again, every person knows the effect of the east wind in this country; the *bis* and *mistral* in the south of France; the bitter piercing *tramontano* of Rome; the *sirocco* of South Italy; the *solano* in Spain; besides the cold winds from Siberia;

the hot blasts from the sandy deserts of Africa ; or the north-west winds that blow from the marshy Pampas of South America, and which often prove injurious to health, even in the much-lauded climate—as it is so named—of Buenos Ayres. In London, the east and north-easterly winds are dry and insalubrious ; the south and south-westerly, humid and unhealthy ; the north is often followed by inflammatory diseases, whereas the west and north-westerly breezes, although usually accompanied by dry and clear weather, are much more healthy and beneficial ; both to mind and body, than winds blowing from any other quarter of the hemisphere.

LONDON NOT INSALUBRIOUS AS A PLACE OF RESIDENCE. Many persons are in the habit of visiting Bath, Cheltenham, Brighton, Tonbridge, and other places of repute in public estimation, under the notion that London is less salubrious, as a residence, than these fashionable localities. Not intending to examine the comparative merits of the different places now named, I shall confine my present remarks to the metropolis, which appears, from the facts stated in previous pages, to have been recently by no means insalubrious. Living in London is not *per se* unhealthy ; it is the manner of life followed by those who dwell in town which so often proves inimical to the health of its inhabitants. If the dictates of nature were more frequently followed, and if common sense, aided by experience, were oftener made the rule of conduct proper to be pursued by individuals, in regard to everything connected with health and hygienic measures, much less sickness would prevail ; whilst the strength of our physical frame, and the condition of our intellectual faculties, would be both greatly improved. More restless spirits or novelty seekers, sometimes others as a mere pretext, go abroad in search of health, or thus endeavour to avoid the variable climate of England, which they, from sheer ignorance, call unhealthy. But there can be no doubt as to the superiority of London as a healthy place of residence, when compared with almost any metropolis in Europe, or even any large town on the continent. The superiority over other places, or the reverse, in a different point of view, is not now the question ; but simply the proved salubrity of the capital of Britain as a residence. Thus, in London, the annual ratio of deaths amongst the whole community, is one in every 42 inhabitants ; in Manchester, one in 26·5 ; in Edinburgh, one in 25·6 ; where, however, the deaths, in 1847, even reached the frightful proportion of one fatal case in every 20·9 of the population, being chiefly from the great fatality of typhus fever. In Liverpool, the ratio is, on an average, one death in every 23·6 of the inhabitants ; whilst in Glasgow, the mortality is so high as one in 21·9 of the population, or double that of London. On the continent of Europe, the difference is equally remarkable ; seeing that in Berlin, built in a sandy plain on the banks of the sluggish Spree, the annual rate of mortality is one in every 34 inhabitants ; in Dresden, one in 31·27 ; in Palermo, one in 31 ; in Paris, one in 30·50 ; in Naples, one in 28 ; in Brussels, one in 26 ; in Rome—far famed as a refuge, but often a grave for invalids, one in 25 ; in Amsterdam, which is constructed on piles, and intersected by canals full of stagnant water, one in 24 ; and in Vienna, it is one in 22 of the entire population ; which, doubtless, is owing, as at Glasgow, in many respects, to the low and damp

situation of the city, from being near the banks of a large river like the Danube; whilst there is often a burning sun during summer, alternating with storms; and in winter, frequently, cold winds that blow from the neighbouring Carpathian mountains.

Besides the several capitals just named, I may also mention Constantinople, so much lauded for its Golden Horn, splendid Bosphorus, and its magnificent surrounding country, as by no means a salubrious residence. This arises, in addition to local influences inimical to health, from the great and sudden variations of temperature, even to the extent of 30 degrees, which often prevail between mid-day and sunset; being sometimes even greater at night. Besides this powerful cause of disease, the *Kara Yell*, (or black wind,) that blows from the north or north-east, and so sweeps down from the Balkan range, or from over the Black Sea, having been previously rendered as cold as ice by passing over the Caucasus mountains, produces severe effects upon the health of the inhabitants of the Turkish metropolis, in which plague and pestilence also prevail.

In North America, where the term of human life is shorter than in Europe, and the "go-a-head" system applies to animal as well as commercial existence, the diminished duration of life is even more obvious. In New York, for example, where a person is almost roasted in summer and frozen during winter, the ratio is, on an average, one death in every 23 inhabitants: whilst severe epidemics and even yellow fever are not uncommon, when the mortality is much augmented. But, however unhealthy New York may appear, it is almost an Elysium in comparison with New Orleans, which seems the pest-house, or Sierra Leone of the United States. In this city, situated on a lower level than one of the largest rivers in the universe, the Mississippi, which is only kept from submerging the whole district by immense dykes and artificial embankments, the gross mortality in 1849 was one death in every 10·66 of the inhabitants. Subtracting, however, the 3,548 fatal cases of Cholera which occurred last year, the mortality from ordinary diseases still reached one in 16·68; but as that epidemic malady always diminishes the amount of deaths from other causes, it will be much nearer the mark to reckon the mortality of New Orleans about one in 14; or treble that of London. In fact, the former city may be almost likened to an hospital for the sick; because, where so many individuals die annually, those labouring under disease must be always very numerous; and it thus appears probable, that the entire population are swept away and replaced every fourteen or fifteen years. Such destruction of human life is unheard of throughout Europe; whilst in England, the ordinary results are very different, even in the most populous, worst drained, or filthiest locality in any part of the whole empire.

Situated on rather elevated ground, upon a gravelly foundation, with frequent declivities, London is by no means unfavourably placed in respect of salubrity, especially on the north bank of the Thames, and towards the west; the southern districts are, however, very different. Although favoured by many natural advantages, the metropolis has been, nevertheless, deteriorated in some respects as a healthy residence by various objectionable proceedings, into which I will not now again enter at any length, having alluded to the subject in former reports. Still, when it is remembered that the river Thames, otherwise so im-

portant, has become the "Cloaca Maxima" of London, and that it carries off the exuviae of its immense population, it is marvellous that matters are not much worse. The innumerable nuisances which are so often created, prove also most injurious to the public health. Some of these might be mentioned; as, for instance, the manufactory of artificial manure close by the Spitalfields workhouse, containing 400 children and a few paupers. Here bullock's blood and night soil were recently desiccated by the dry heat of a kiln, thereby causing a most powerful stench, which produced severe typhoid fever and other diseases of an intractable form. Again, in the "Potteries" near Kensington, 3,000 pigs were kept: and the process of fat boiling was also carried on so extensively, that the atmosphere became tainted for half a mile round; whilst the hovels for the inhabitants could scarcely have been surpassed for filth and misery by any thing known in Ireland. But even in aristocratic neighbourhoods, the best means to improve the salubrity of a district are not only neglected, but schemes are occasionally proposed which would have an opposite and injurious tendency. The parks—justly called the lungs of London,—St. James's and Kensington Gardens, for example, are encumbered with trees, whilst further additions are sometimes made injudiciously, so that free ventilation is interrupted, and damp engendered in localities, where the light of the sun and the winds of heaven ought more freely and constantly to penetrate.¹ Besides neglecting such matters, it was actually intended, in the summer of 1849, to spread over the surface of Hyde Park the filthy contents of the great common sewer which passes through its centre, in order, it was said, to have more grass for the cows there grazing, the scheming projectors never thinking of the lungs of those Londoners who might come here with the intention of breathing the pure north-western breeze, but, in reality, to sniff the mephitic exhalations produced by such contemplated irrigations. Fortunately, a strong representation in the proper quarter prevented the proposed abomination, just when all the machinery was completed, so that the absurd proposal was never carried forward; although a memento still remains of the *original idea*, in the shape of a huge iron pump with a large handle, which now points towards the field of its projected, but hitherto abortive, operations.

I will now proceed to make a few observations on some circumstances, the judicious or improper application of which materially influence the health of individuals, and hence of communities. I allude to, 1. Food; 2. Clothing; 3. Habits or Customs; and 4, Bodily Exercise.

Food. Although many individuals in London may sometimes not have sufficient food for proper nourishment to support their physical frame, others exist who would enjoy often much better health, were they more careful in regard to dietary. This truth particularly applies to children and persons of sedentary habits. The quantity of animal food which many of these parties consume, is far beyond the requirements of nature; hence arise stomach complaints, visceral congestions, and, in old people, apoplexies, paralysis, with other maladies occasioned by

¹ A great improvement would be effected, if the high wall on the north side of Kensington Gardens were replaced by an iron railing, so that the wind might blow freely through the trees to dry the gravel walks and grass, the dampness of which greatly diminishes the pleasantness and salubrity of this promenade.

their full habit of body, and from their blood being too much animalised. Even when of good quality, and taken in proper quantity, food often proves prejudicial to health by improper and imperfect cooking; acting as a very common cause of dyspeptic complaints, which are so frequent in this country. All kinds of provisions, but especially animal food, are generally of much better quality in London than elsewhere; but, being often injudiciously cooked and badly prepared for digestion, they are not so beneficial as they would otherwise prove. Much attention is given in England to the rearing of animals as food for the inhabitants; and societies exist, by whom prizes are awarded to the producers of fat pigs and overgrown oxen; but no rewards are ever given, or public encouragement held out, to teach persons how to cook properly and economically. This is a great desideratum. Were more attention generally given to the manner of preparing even ordinary articles of diet (especially for young and debilitated persons), better bodily health and greater mental activity would be ensured.

The victuals and beverages best adapted for individuals, vary according to their constitutions and occupations; but it may be stated as a general rule, that the man who is much engaged with bodily labour in the open air, requires more nutriment than an intellectual person of sedentary habits.

CLOTHING. Many persons, but especially children and females, suffer in health from inattention to covering their bodies properly and equally. Bare necks in females, uncovered arms, legs, and throats in children, prove always most hazardous to health, and, along with other obvious causes, materially contribute to the larger amount of sickness and death which occurs amongst these two classes of persons than among adults. The partial and improper mode of clothing the susceptible physical frames of children, is sometimes attempted to be justified by the most absurd of all reasons, that their constitutions will thereby be hardened. Such a proceeding does certainly try the strength of their powers of resisting disease; but, although some may escape unscathed, many fall a sacrifice.

The system of tight lacing in females, which fashion sanctions, although reason and experience strongly condemn, likewise proves frequently detrimental to health, by impeding the free action of the lungs and heart; whilst the equally important abdominal organs,—the liver, stomach, and other viscera,—are thereby displaced, and even forced down upon the pelvis. This is not an exaggerated, but a true picture. Such distortions of the graceful forms of the fairest portion of creation, must fill every admirer of the beautiful in symmetry with distress and astonishment. If Cleomenes, the sculptor of the Venus de Medici, if Pheidias, Praxiteles, or any of the great Grecian statuary, whose works of art have been the admiration of every succeeding age, were to revisit the earth, and frequent the fashionable European world of 1850, with its boasted civilization, they would indeed be astounded!

UNHEALTHY HABITS AND CUSTOMS. The middle and upper classes in Great Britain are decidedly much more temperate in their habits than formerly; and instances of intoxication are now very rare exceptions. But among the lower ranks, and even among the very poor, intemper-

ance is too often met with, as shewn by the number of well-frequented gin-palaces. The fiery spirit there imbibed acts as a frequent and powerful cause of disease in the physical frame, and also, too often proves destructive to the mental faculties.

But although intemperance in spirituous liquors be almost unknown in certain ranks, a vice appears to have taken its place, which I think as great an abomination, and equally destructive to health, namely, tobacco-smoking, especially amongst the younger portion of the male population. Dyspepsia, nervousness, paralysis, and madness, may be confidently enumerated as some of the evil consequences produced by the use of this narcotic and poisonous weed. Many medical practitioners in this country know well, that the health and constitution of persons are frequently injured by smoking tobacco. In North America, also, the subject has occupied the attention of several physicians, who have written against this habit, as well as against the vice of intemperance by ardent spirits. Indeed, insanity has been so often traced to the operation of tobacco, that it is now one of the recognized causes, like opium and ardent spirits, of that severe malady; and it has been prohibited in several American lunatic asylums. How men of intellect and education should ever be induced to adopt this filthy, health-destroying, and vulgar custom, so common amongst cab-men and pot-house frequenters, is to me astonishing. In this, however, as in other cases, fashion and example prove, unfortunately, too powerful against reason and experience.

Another injurious custom, which prevails chiefly among females and children in the middle and upper ranks, deserves also some notice. I allude to the greater consumption of tea at present, than formerly, especially at unseasonable hours, and when the stomach is empty; because an infusion of tea, and still more so if made with green, then acts more powerfully upon the nervous system. The practice of taking such a beverage, which acts upon the nervous and circulating systems of individuals, an hour or two before dinner, and which has recently become fashionable amongst ladies, is highly prejudicial to health, however grateful it may be to the palate at the time. Like tobacco-smoking amongst men, or opium inebriation, so common in Turkey and China, the practice of drinking tea in the manner described should never be sanctioned. At breakfast, when solid food is also taken, the effect is different, as digestion is then promoted, and any deleterious effect which tea might otherwise produce upon the nervous system is materially counteracted. Nevertheless, as the physiological action of this aromatic leaf is that of a nervous excitant and cordial, it hence produces various forms of neuralgic pains, affections of the stomach, with other disorders of the viscera, which often baffle all treatment, unless the cause now adverted to be removed.

However injurious tea may thus sometimes prove to adult persons, it becomes in a higher degree detrimental to children, and young people, from exciting their more susceptible nervous and cerebral systems. When taken habitually under such circumstances, it excites and renders irritable their physical constitution, by unduly developing the cerebral structure and its functions; hence, I consider, this beverage should be put almost in the same category with tobacco, opium, ardent

spirits, or wine, and ought never to be allowed to very young individuals, unless as a medicine.

EXERCISE. Many persons in London, as elsewhere, have plenty and frequently more than sufficient muscular movement that might be called exercise, in one sense of the expression; but unfortunately, being often in confined or unhealthy localities, and sometimes when employed in deleterious trades or occupations, their exertions become toil and exhausting labour. In the metropolis, although many individuals are obliged to work to procure daily bread, others pass their physical if not moral existence in indolence, which becomes doubly detrimental to health, if accompanied by luxurious living and repletion. Similar consequences also ensue where the mind is exhausted or long kept in a state of tension, and especially if the party breathe an impure, confined atmosphere. Indeed, numbers may be met with, whose general health and mental vigour would be much improved, were they to take more bodily exercise, and be oftener in the open air. Fewer dyspeptic and bodily ailments would prevail, if the above useful precept were followed.

Allusion has been already made to the public parks of London, which are denominated the lungs of the metropolis. The expression is correct, although figurative; but it is astonishing how very little practical advantage is taken of the privilege which they afford to the inhabitants of breathing their pure breezes which, especially in the morning, are so conducive to health, as the atmosphere is then untainted by dust or smoke. A walk before breakfast in any of these promenades, will at once establish the truth of this remark, and show the inactive habits of the adjacent neighbourhood, especially of the younger and female part of the population. This neglect conduces to the greater amount of sickness and impaired health noticed amongst them, contrasted with that of the male portion of the community. Undoubtedly, the human frame may have both too little, as well as too much bodily exertion. In this, as in diet, extremes should be always avoided, since to no point more than to either of the above questions is the well-known and truly philosophical axiom, "*in medio tutissimus ibis*", in a higher degree applicable. To this it may be also added, that as the physical constitution of man often wastes from the want of sufficient muscular movement, so will the nervous organization, on other occasions, become exhausted or worn out by excessive toil, as well as from too great mental excitement.

